

Lycopersicon esculentum (tomato) RdRP¹ (cDNA by Wassenegger et al.)
Nicotiana tabacum RdRP¹ (cDNA by Wassenegger et al.)
Arabidopsis thaliana RdRP¹ (AC006917) = AJ011977 (Wassenegger et al.)

MGKTIQVFGFPYLLSAEVVKSFLEKYTGTVCALEVKQS-KGGSRFAKVQFADNISAD
MGKTIQVFGFPYLLSAEVKKFLENHTGNGTVYALEVKQS-KGGRRFAKVQFANNKSAE
MGKTIQVFGFPNGVSAEVKKFLERLTGSGTVYAIKVRQPKGGP_RVYAI_VQFTSERHTR

KITLANNRLYFGSSY_LKAWEMKTDIVQ-LRAYVDQMDGITLNFGCQISDDKF_AVLGST-
FIIDLASKGLYYGPSYLKAWE_MKTDIVQ-PRTYVEHMDGVTLNF_GCQISDKKF_AVLGSK-
LIITAAAERLYYGRSYLKAF_EVEQDIVPKP_RASLHT_ISGLKMFFGCQVSTKKFLTLWSAQ

EVSIQFGIGLKKFFFFLSSGSADYKLQLSYENI_WQVVLHRPYGQNAQFLLIQLFGAPRIY
DVS_IKFGIGLKKIYFFLSH_AD_DYKLQLSYENI_WQVVLHRPYGQNAQFLLIQLFGAPRIY
DVCV_SFGIGMRKLHFSFSWYQKD_YRL_ELSYENI_WQIDLHSPQGRSSKFLV_IQVIGAPKIF

K-----RLEN_SCYSFFKETPDDQWV_RTTDFPPS-WIGLSSSLCLQFRRGVRLPNFEESF
K-----RLED_SCYSFFKETPDDQWV_RTTDF_TPS-WIGLSSSLCL_EFRNGVQLPNFSESF
EKEDQPINLLFGIMDFYSDGSDEQW_IRTTDF_TSSCIQ_STAFCLELPVHLNVPDFREN_F

FHYAERENNITLQTGFTFFV_SQKSALVPNVQ_PPEGISIPYKILFKISSLVQHGCIPGPAL
FYYKESMNQFILQTGFTFS_SQKLALVPIVHLPEGIEL_PYKILFKISSLIQHGFPG_LAL
ANYAEHRASSFLIESGSSY_SNNANTL_VPVVDP_PPGFSLP_EILFKLNTLVQNA_CLSGPAL

NVYFFRLVD_PRRRN_VACIEHALEKLYYIKECCYDPVRWLTEQYDG_YL-KGRQPKSPSIT
NFNF_FQLVD_PRRRN_VACIEHALEKLYY_LKECCYDPVRWLTEQYDEYL-KGRQLPKSP_PIT
DLD_FYRLLNQKKYDRALIDHCLEKL_FH_LGECCYEPAH_LRDEYKKWISK_GK-LPLSP_TIS

LDDGLVYVRRVLVT_PCKVYFCGP_EVNVSNRVL_NYSEDIDN_NFLRVS_FVDEEWEKLYSTDL
LDDGLVYVRRVV_VTPCKVYFCGP_EVNVSNRVL_NYSEDIN_NFLRVS_FVDEEWEKIHS TDL
LDDGLVYMYRVQVTPA_RVYFSGP_EVNVSNRVL_RHYSKYIN_NFLRVS_FVDEDLEK_VRSMDL

LPKASTGSGVRTNIYERILSTLRKG_FIGD_KK_FEFLAF_SSQLRDNSVWMFASRPGLTAN
LPRASTGNGTRD_IYERILSTLRNG_FIGD_KR_FEFLAF_SSQLRDNSVWMFASRPGLTAN
SPRSSTQ--RRTKLYDRIYSVL_RDGI_VIGD_KK_FEFLAF_SSQLRENSAWMFAPIDRITAA

DIRAWMGDFSQIKNVAKYAARLGQSF_SRET_SVL_RH_EIEV_IPDV_K--VHGTSYVF_SDG
DIR_TWMGDFRQIRNVAKYAARLGQSF_SRET_SVG_RHEVEV_IPDVAC_SL_HGTNY_IF_SDG
HIRAWMGDFDH_IRVAKYAARLGQSF_SSSRET_NVR_SDEIEV_IPDV_EIISLGTRYVF_SDG

IGKISGDF_AHRV_ASKC_GLQ-YTPSAFQ_IRYGGYKG_VV_GVDP_SSM_KL_SLRK_SMSK_YESDN
IGKISAD_AHRV_TI_KC_GLQ-YTP_SS_FQ_IRYGGYKG_VV_AVDP_SSM_KL_SLRK_SMLK_YESNN
IGKISAEFARKV_AR_KC_GL_TE_FSP_SAFQ_IRYGGYKG_VV_AVDP_NSS_KL_SLRK_SMSK_FESEN

I_KL_DV_LGW_SSKYQPCYLN_RQL_ITL_LSTL_GV_KDEV_LEQ_KQ_EAVD_QD_LA_IL_HDSL_KA_QE_ALE
I_KL_DV_LGW_SSKYQPCYLN_RQL_VTL_LSTL_GV_IDD_VLEQ_KQ_EAVD_QD_LA_IL_HDSL_KA_QE_ALE
T_KL_DV_LLAWSKYQPCYMN_RQL_ITL_LSTL_GV_TDS_VFEKK_QREV_VDR_LA_IL_HPLEAHEALG

L_MSP_GENTN_ILKAMLN_CGYKPDAEP_FLSMMLQ_TFRASK_LLD_LR_TR_SR_IF_IP_NG_RTMMGCL
L_MSP_GENTN_ILKEMLN_CGYMPDAEP_FLSMMLQ_TFRASK_LLD_LR_TR_TIF_IP_NG_RTMMGCL
L_MAP_GENTN_ILKAL_ILC_GYKPDAEP_FLSMMLQ_NFRASK_LLE_LR_TK_TIF_IS_GGR_SMMGCL

DESRTLEYGQVFVQFTGAGHGEF_SDDLHP_FNN_SR_TNS_NFIL_IKG_NV_VVAK_NP_CL_HPG_DIR
DESRTLEYGQVFVQFSGAGRQ_FEE_HPF_ND_SGAN_CDF_IL_KKG_NV_VVAK_NP_CL_HPG_DIR
DE_TRTLEYGQVVVQYS-----DPM_RPG_RRF_IITGP_VVVAK_NP_CL_HSG_DVR

V_LKAVNV_RALHHMVDCVVFPQKGKRPH_PNECSGSDLDGDIYF_VCWDQDM_IPPRQVQPM_EY
V_LR_AV_DV_PALHHMVDCVVFPQKGKRPH_PNECSGSDLDGDIYF_VCWD_PD_IPPRQVQ_SMDY
VLQAVN_VPALNHMVDCVVFPQKG_LRPH_PNECSGSDLDGDIYF_VCWDQELVPPRTSEPM_DY

PPAPS_IQLDHDVTIEEVEEYFTNYI_VNDSL_GI_IANAHVV_FADREP_DMAMS_DPCK_KLAELF
TPAP_TTQLDHDVTIEEVEEYFTNYI_IND_SL_GI_IANAHVV_FADREP_DMAMS_DPCK_QLAQLF

TPEPTQILDHDVTIEEVEEYFANYIVNDSLGIIANAHTAFADKEPLKAFSDPCIELAKF

SIAVDFPKTGVPAEIPSQLRPKEYPDFMDKPKTSYISERVIGKLFRKVDKAPQASSIA
SIAVDFPKTGVPAEIPSQLRPKEYPDFMEKPKPTYPSEKVGKLFQKVKNKTPQASSIA
STAVDFPKTGVAAVIPQHLYVKEYPDFMEKPKPTYESKNVGKLFREVKERAPPLISIK

TFTRDVARRSYDADMEVDGFEDYIDEAFDYKTEYDNKGNLMDYYGIKTEAEILSGGIMK
TFTRDVARSKSYDSDMIVDGFEDYIDEAFY YKSEYDNKGNLMDYYGIKTEAEILSGGIMK
SFTLDVASKSYDKDMEVDGFEEYVDEAFYQKANYDFKLGNLMDYYGIKTEAEILSGGIMR

ASK - TFDRRKDAAEAISAVRALRKEARAWFKRRNDIDDMPLKASAWYHVTYHPTYWG
CYN ASK - TFDRRKDAAEAI GAVRCLRKEARAWFKRRSDIDDMPLAKASAWYHVTYHHTYWGLYN
MSKSFTKRR - DAESIGRAVRALRKETLSLFNASEEEEENESAKASAWYHVTYHSSYWG
LYN

QGLKRAHFISFPWCVYDQLIQIKKKDKARNRPVLNLSSLRAQLSHRLVLK
EGLKRDHFISFPWCVYDQLIQIKKKAKARKRPVPHLSSLGSQSRKLVIW
EGLNRDHFLSF
FAWCVYDKLVRIKKTNLGRRQRQETLERLDHVLRFG

Alignment of the tomato RdRP1 amino acid (1114 AA) sequence with the tobacco RdRP1 amino acid (1116 AA) sequence:
85,8% Identity and 92,4% Similarity

Alignment of the tomato RdRP1 amino acid sequence with the Arabidopsis RdRP1 amino acid (1107 AA) sequence:
61,9% Identity and 76,7% Similarity